



GZA
GeoEnvironmental, Inc.
Engineers and Scientists

Fairmount Minerals, Ltd.

Wedron Silica Co.

Wedron, Illinois

Boring No.: MW-10

Page: 1 of 2

File No.: 20.0151178.50

Check: Bernard Fenelon

Contractor: Cascade Drilling

Foreman: Jason Dravek

Representative: Dave Bauer

Date Start/Finish: 12-3-13 / 12-3-13

Boring Location: NE of Scale (Technisand Wedron)

GS Elev.: 520.6' Datum:

Type:

O.D. / I.D.: 6"

Hammer Wt.:

Hammer Fall:

Other:

Auger/
Casing

Sampler

Sonic Barrel

4.5"

GROUNDWATER READINGS

Date Time Depth Casing Stab

Depth, (ft)	Sample Information					Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed	
	No.	Pen./ Rec., (in)	Depth, (ft)	Blows, (/6")	Field Test Data					
1	1	30/30	0-2.5			Well-graded SAND (SW), fine to coarse and well-graded GRAVEL (GW), medium to coarse; trace cobbles	SW/GW			
2										
3	2	30/30	2.5-5			Well-graded SAND and GRAVEL (SW-GW), medium to coarse; trace cobbles; dry				
4										
5	3	60/60	5-10			24" Well-graded SAND (SW), fine to medium; trace Gravel, fine; brown 36" SILT (ML) with Gravel, medium to coarse; brown, dry	5' SW			
6										
7							7' ML			
8										
9										
10	4	30/30	10-12.5			18" SILT (ML) with Gravel, medium to coarse; brown, moist 12" Very stiff, lean CLAY (CL); trace organics; brown, moist	11.5' CL			
11										
12	5	30/30	12.5-15			12" Very stiff, lean CLAY (CL); trace organics; brown, moist 18" Well-graded SAND (SW), fine to medium, dry, bedrock at 13.5'	13.5' SW (BEDROCK AT 13.5')			
13										
14										
15	6	30/30	15-17.5			Well-graded SAND (SW), fine to medium; white, dry				
16										
17										
18	7	30/30	17.5-20			Well-graded SAND (SW), fine to medium; trace coarse Sand; white, dry to moist				
19										

REMARKS

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Boring No.: MW-10

WELL BOR NEW 151178.50 DRAFT BORING LOGS, DECEMBER 2013 - WELL BOR NEW.GPJ, GZADEPTH.GDT 2/24/14



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Depth, (ft)	Sample Information					Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
	No.	Pen./ Rec., (in)	Depth, (ft)	Blows, (/6")	Field Test Data				
21	8	30/30	20-22.5			Well-graded SAND (SW), fine to coarse; white to orangish, very moist to wet at 21.5'	SW (BEDROCK AT 13.5')		
22									
23	9	30/30	22.5-25			Well-graded SAND (SW), fine to coarse; off-white to gray, very moist to wet			
24									
25	10	60/60	25-30			Well-graded SAND (SW), fine to coarse, gray, wet			
26									
27									
28									
29									
30	11	24/24	30-32			Well-graded SAND (SW), fine to coarse, gray, wet			
31									
32							32.5'		
33						END OF BORING AT 32.5'			
34									
35									
36									
37									
38									
39									
40									
41									
42									
43									

REMARKS

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Boring No.: MW-11

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File No.: 20.0151178.50

Check: Bernard Fenelon

Contractor: Cascade Drilling

Foreman: Jason Dravek

Representative: Dave Bauer

Date Start/Finish: 12-3-13 / 12-3-13

Boring Location: NW of Screen House (Mine Prop)

GS Elev.: 520.9' Datum:

Auger/
Casing

Sampler

Type:

Sonic Barrel

O.D. / I.D.: 6"

4.5"

Hammer Wt.:

Hammer Fall:

Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Depth, (ft)	Sample Information					Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed	
	No.	Pen./ Rec., (in)	Depth, (ft)	Blows, (/6")	Field Test Data					
1	1	60/60	0-5			Well-graded SAND (SW), fine to coarse; some Gravel, medium; brown	SW			
2										
3										
4										
5	2	60/60	5-10			Well-graded SAND (SW), fine to coarse; some Gravel, medium; little cobbles; brown, dry				
6										
7										
8										
9										
10	3	30/30	10-12.5			10" Well-graded SAND (SW), fine to coarse; some Gravel, medium; little cobbles; brown, dry	10.8' CL			
11						12" Lean CLAY (CL); trace Silt	11.8' SW			
12	4	30/30	12.5-15			8" Well-graded SAND (SW), fine to coarse; little Gravel, medium; brown				
13						12" Well-graded SAND (SW), fine to coarse; little Gravel, medium; brown				
14						18" Well-graded SAND (SW), fine to medium; white, dry, bedrock at 13.5'	BEDROCK (13.5')			
15	5	30/30	15-17.5			18" Well-graded SAND (SW), fine to medium; white, dry				
16										
17										
18	6	30/30	17.5-20			Well-graded SAND (SW), fine to coarse; white to orangish-white; dry to moist				
19										

REMARKS

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Depth, (ft)	Sample Information					Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
	No.	Pen./ Rec., (in)	Depth, (ft)	Blows, (/6")	Field Test Data				
21	7	30/30	20-22.5			Well-graded SAND (SW), fine to coarse; white to orangish-white; dry to moist	SW		
22									
23	8	30/30	22.5-25			Well-graded SAND (SW), fine to coarse; orangish-white to gray, very moist to wet			
24									
25	9	30/30	25-27.5			Well-graded SAND (SW), fine to coarse; orangish-white to gray, very moist to wet			
26									
27									
28									
29									
30	10	48/48	30-34			Well-graded SAND (SW), fine to coarse; orangish-white to gray, wet			
31									
32									
33									
34						END OF BORING AT 54'			
35									
36									
37									
38									
39									
40									
41									
42									
43									

REMARKS

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Depth, (ft)	Sample Information					Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
	No.	Pen./ Rec., (in)	Depth, (ft)	Blows, (/6")	Field Test Data				
45							SW		
46									
47									
48									
49									
50									
51									
52									
53									
54							54'		
55									
56									
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61									
62									
63									
64									
65									
66									
67									

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Boring No.: MW-12

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File No.: 20.0151178.50

Check: Bernard Fenelon

Contractor: Cascade Drilling

Foreman: Jason Dravek

Representative: Dave Bauer

Date Start/Finish: 12-3-13 / 12-3-13

Boring Location: W of Main Office (Mine Prop)

GS Elev.: 532.6' Datum:

Auger/
Casing

Sampler

GROUNDWATER READINGS

Type:

Sonic Barrel

O.D. / I.D.: 6"

4.5"

Hammer Wt.:

Hammer Fall:

Other:

Date	Time	Depth	Casing	Stab

Depth, (ft)	Sample Information					Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed	
	No.	Pen./ Rec., (in)	Depth, (ft)	Blows, (/6")	Field Test Data					
1	1	60/60	0-5			6" Organic CLAY (OL); black 12" Very stiff SILT (ML); trace Sand, fine 42" Lean CLAY (CL); trace Gravel, fine; brown, dry to moist	0.5' OL ML 1.5' CL			
2										
3										
4										
5	2	60/60	5-10			24" Well-graded SAND (SW), fine to coarse; brown, wet 36" Lean CLAY (CL); little Sand, fine; trace Gravel, medium; moist	5' SW 7' CL			
6										
7										
8										
9										
10	3	60/60	10-15			6" Lean CLAY (CL); little Sand, fine 18" CLAY and SAND (SC), fine to medium; brown, moist 12" Very stiff, lean CLAY (CL); trace Gravel, fine; gray, moist 6" Well-graded SAND (SW), fine to coarse, with Gravel, fine to medium 18" Lean CLAY (CL); some Gravel, medium to coarse; trace cobbles; gray	10.5' SC 12' CL			
11										
12										
13										
14										
15	4	60/60	15-20			50" Lean CLAY (CL); some Gravel, medium to coarse; gray, moist 10" Poorly-graded SAND (SP), medium; brown, moist	16.2' SP			
16										
17										
18										
19										

REMARKS

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Depth, (ft)	Sample Information					Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
	No.	Pen./ Rec., (in)	Depth, (ft)	Blows, (/6")	Field Test Data				
21	5	60/60	20-25			6" Poorly-graded SAND (SP), medium; brown, moist 54" Lean CLAY (CL); some Gravel, medium to coarse; little Sand, medium to coarse; gray, moist	20.5' SP CL		
22									
23									
24									
25	6	60/60	25-30			Lean CLAY (CL); some Gravel, medium to coarse; little Sand, medium; gray, moist			
26									
27									
28									
29									
30	7	60/60	30-35			18" Lean CLAY (CL); some Gravel, medium to coarse; little Sand, medium; gray, moist 42" Well-graded SAND (SW), medium to coarse; gray to orangish, moist to very moist	31.5' SW		
31									
32									
33									
34									
35	8	60/60	35-40			Clayey SAND (SC); little Gravel, medium to coarse; brown, very moist to wet	35' SC		
36									
37									
38									
39									
40	9	60/60	40-45			Clayey SAND (SC); little Gravel, medium to coarse; brown, very moist to wet			
41									
42									
43									

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Depth, (ft)	Sample Information					Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
	No.	Pen./ Rec., (in)	Depth, (ft)	Blows, (/6")	Field Test Data				
45						END OF BORING AT 45'	SC 45'		
46									
47									
48									
49									
50									
51									
52									
53									
54									
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67									

**R
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Boring No.: MW-13

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File No.: 20.0151178.50

Check: Bernard Fenelon

Contractor: Cascade Drilling

Foreman: Jason Dravek

Representative: Dave Bauer

Date Start/Finish: 12-4-13 / 12-4-13

Boring Location: SE of Pit 3 (Mine Prop)

GS Elev.: 532.8' Datum:

Auger/
Casing

Sampler

Type:

Sonic Barrel

O.D. / I.D.: 6"

4.5"

Hammer Wt.:

Hammer Fall:

Other:

GROUNDWATER READINGS

Date	Time	Depth	Casing	Stab

Depth, (ft)	Sample Information					Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed	
	No.	Pen./ Rec., (in)	Depth, (ft)	Blows, (/6")	Field Test Data					
1	1	60/60	0-5			Well-graded SAND and well-graded GRAVEL (SW-GW), fine to coarse; some Clay; gray, moist	SW-GW			
2										
3										
4										
5	2	60/60	5-10			Well-graded SAND (SW), fine to coarse; some Gravel, coarse; some Clay; gray, moist	5' SW			
6										
7										
8										
9										
10	3	60/60	10-15			18" Well-graded SAND (SW), fine to coarse; some Gravel, coarse; some Clay; gray, moist				
11						42" Lean CLAY (CL); little Gravel, medium to coarse; gray, moist	11.5' CL			
12										
13										
14										
15	4	60/60	15-20			Lean CLAY (CL); some Gravel, fine to coarse; little well-graded Sand, fine to coarse; gray, moist				
16										
17										
18										
19										

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Depth, (ft)	Sample Information					Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
	No.	Pen./ Rec., (in)	Depth, (ft)	Blows, (/6")	Field Test Data				
21	5	60/60	20-25			Lean CLAY (CL); some Gravel, fine to coarse; little well-graded Sand, fine to coarse; gray, moist	CL		
22									
23									
24									
25	6	60/60	25-30			Clayey SAND (SC), some Gravel, fine to coarse; gray, very moist to wet	25' SC		
26									
27									
28									
29									
30	7	60/60	30-35			Clayey SAND (SC); some Gravel, fine to coarse; trace cobbles; gray to black, very moist to wet			
31									
32									
33									
34									
35	8	120/120	35-45			Clayey SAND (SC); some Gravel, medium to coarse; gray to black, wet			
36									
37									
38									
39									
40									
41									
42									
43									

REMARKS

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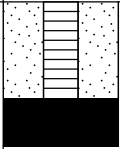
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Depth, (ft)	Sample Information					Sample Description & Classification	Stratum Desc.	Remarks	Equipment Installed
	No.	Pen./ Rec., (in)	Depth, (ft)	Blows, (/6")	Field Test Data				
45	9	24/24	45-47			Clayey SAND (SC); some Gravel, medium to coarse; gray to black, wet	SC		
46									
47							47'		
48						END OF BORING AT 47'			
49									
50									
51									
52									
53									
54									
55									
56									
57									
58									
59									
60									
61									
62									
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66									
67									

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